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06 (08.02.3; 08.14.2; 08.09.02 GRS 1741.9−2853; 13.25.1; 13.25.5) Discovery of type-I X-ray bursts from GRS 1741.9–2853

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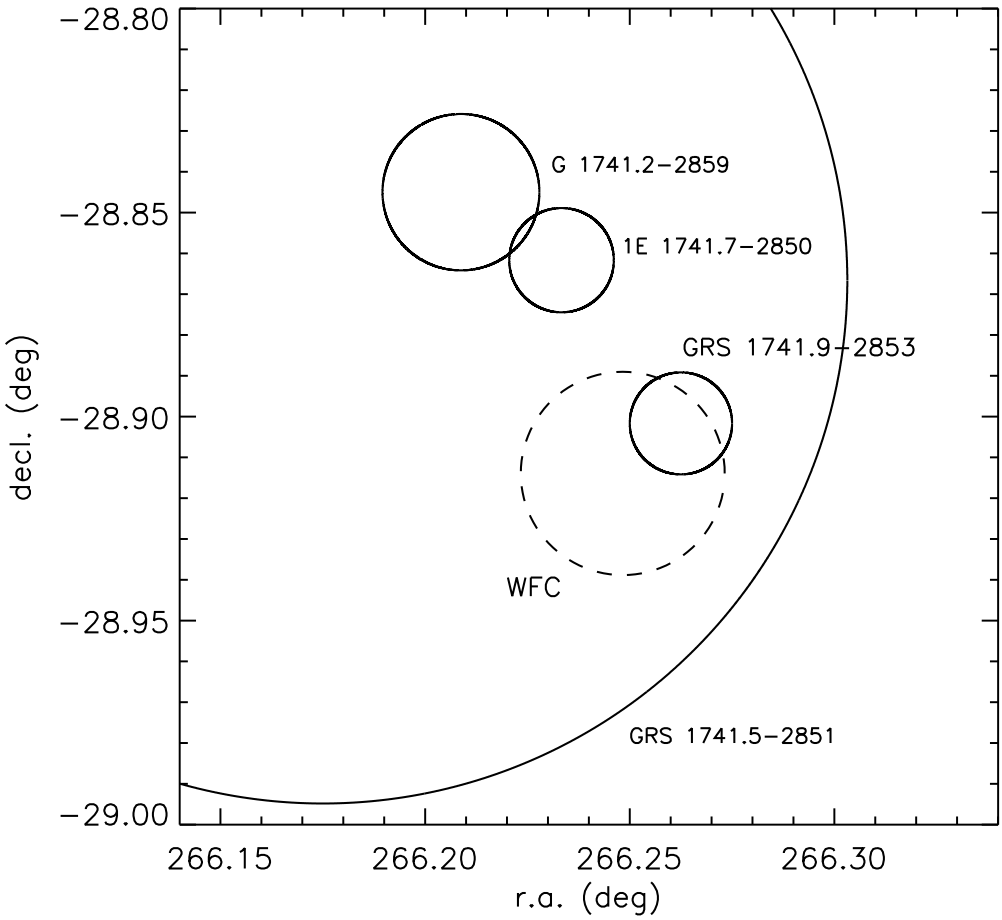
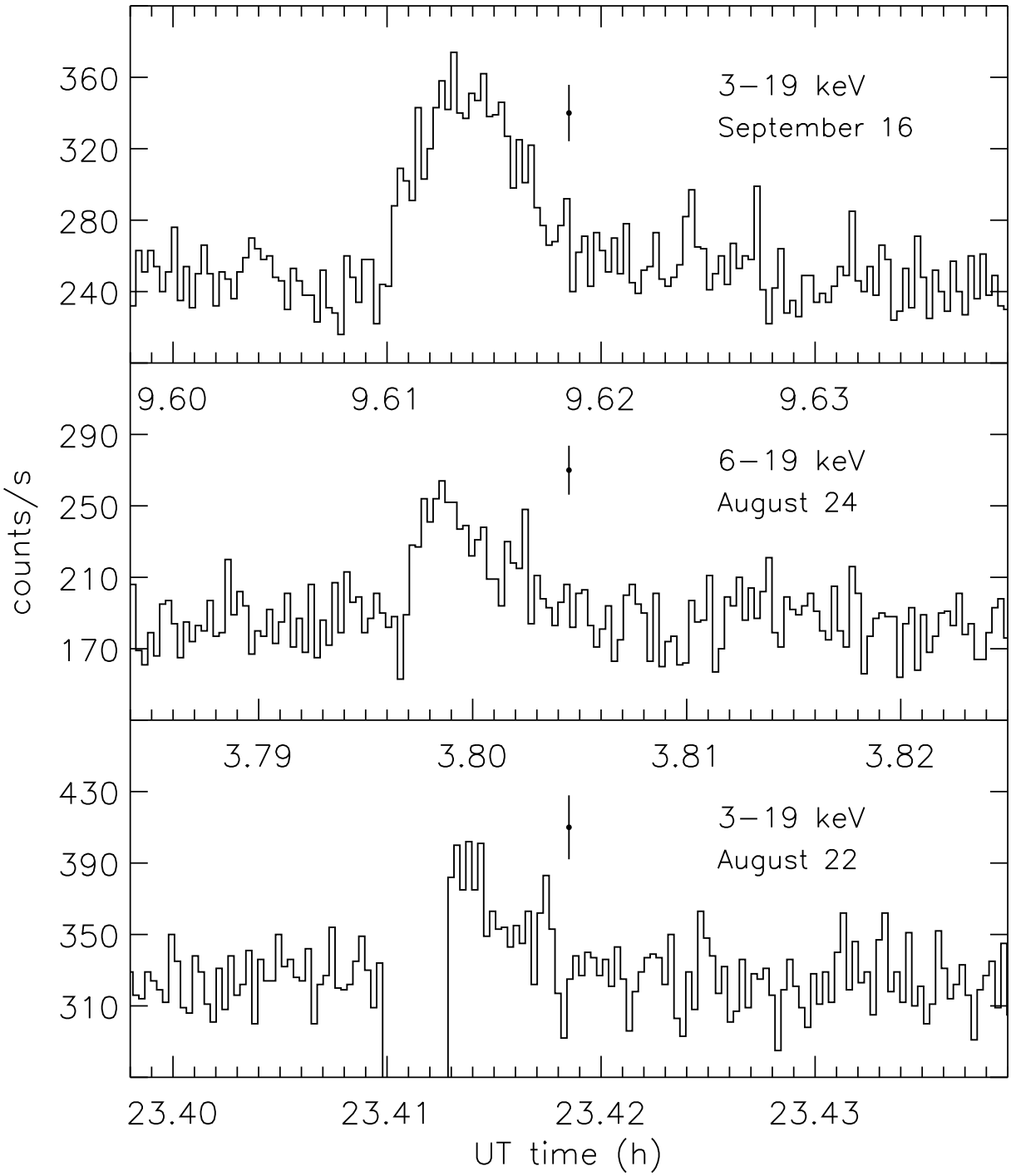
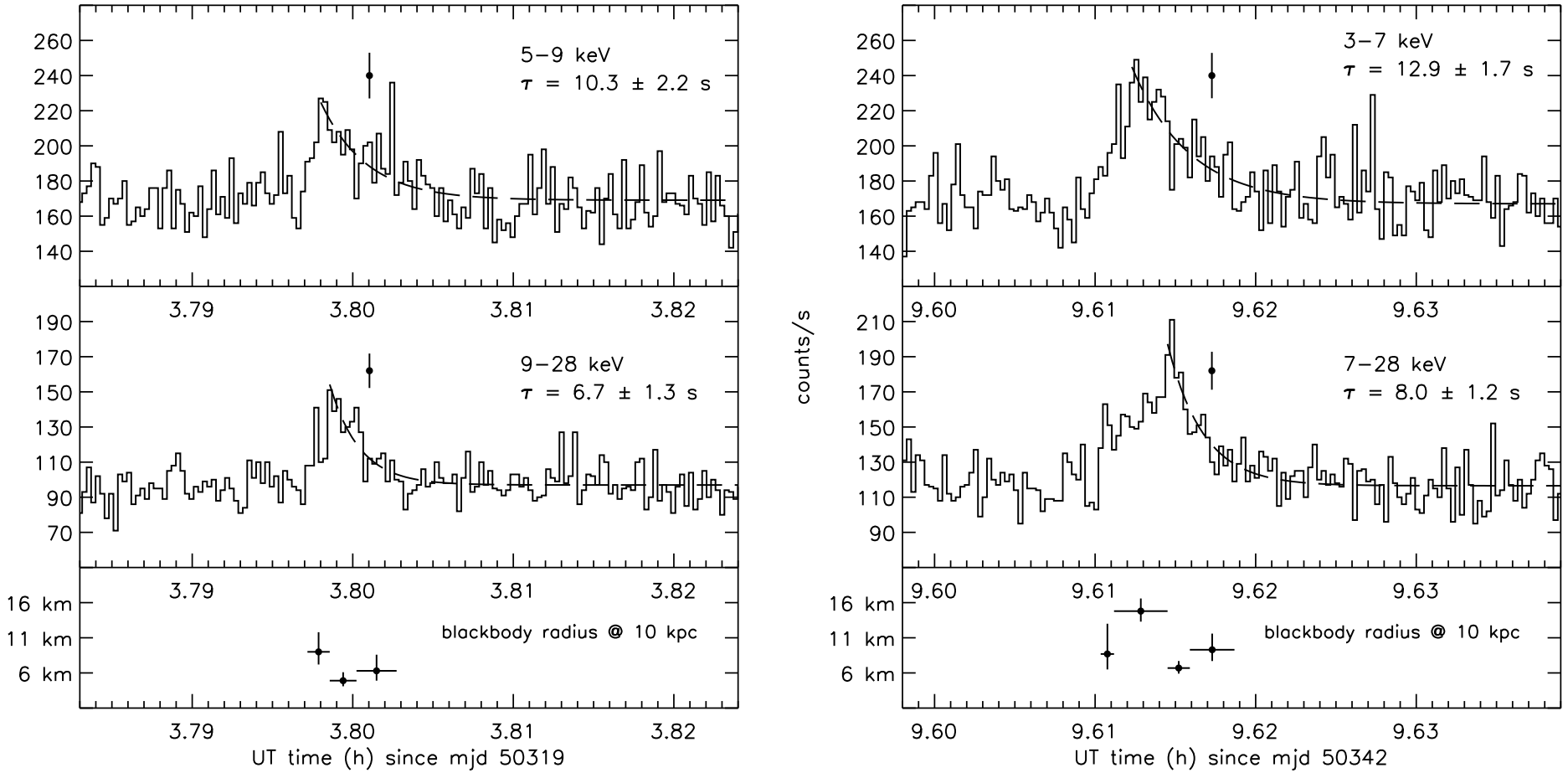
abstract For the first time X-ray bursts have been detected from a sky position consistent with the one of GRS 1741.9−2853, a GRANAT transient source located only $\sim$ 10 from the Galactic Centre. A total of 3 bursts have been observed by the Wide Field Cameras telescopes on board BeppoSAX during a monitoring observation of the Sgr A region in August-September 1996. The characteristics of the events are consistent with type-I bursts, thus identifying the source as a likely low-mass X-ray binary containing a neutron star. Evidence of photospheric radius expansion due to super-Eddington luminosity is present in one of the observed bursts, thus leading to an estimate of the source distance ($\sim$ 8 kpc).

binaries:close – stars: neutron, individual (GRS 1741.9−2853) – X-rays: bursts


−28.80
−28.85
−28.90
−28.95
−29.00
decl. (deg)
266.15
266.20
266.25
266.30
r.a. (deg)
G 1741.2−2859
1E 1741.7−2850
GRS 1741.9−2853
WFC
GRS 1741.5−2851


3–19 keV
September 16
6–19 keV
August 24
3–19 keV
August 22
counts/s
UT time (h)
360
320
280
240
290
250
210
170
430
390
350
310
9.60
9.61
9.62
9.63
3.79
3.80
3.81
3.82
23.40
23.41
23.42
23.43


5−9 keV
τ = 10.3 ± 2.2 s
9−28 keV
τ = 6.7 ± 1.3 s
blackbody radius @ 10 kpc
16 km
11 km
6 km
UT time (h) since mjd 50319
3−7 keV
τ = 12.9 ± 1.7 s
7−28 keV
τ = 8.0 ± 1.2 s
blackbody radius @ 10 kpc
counts/s
UT time (h) since mjd 50342